



App. Ser. No. 10/051,459
Atty. Dkt. No.: 2265.50685
PATENT

REMARKS

Claims 1-17 are currently pending in the present Application, following withdrawal of claims 18-49 pursuant to the May 10, 2004 Requirement.

Claims 1-17 stand rejected under § 102(b) as anticipated by U.S. Patent No. 5,628,960 to Beer, *et al.* ("Beer") or U.S. Patent No. 4,894,157 to Johnson ("Johnson").

The Applicants are requesting entry of the foregoing amendments to claim 1 to clarify that: (i) the claimed cellulose membrane is a no-through-flow diagnostic membrane, *i.e.*, a membrane on which flow proceeds laterally across the membrane surface, not through membrane pores; and (ii) the impurities to be removed are filter dust impurities.

1. The Applicants Respectfully Submit The Applicants' February 7, 2005 Remarks Have Been Misinterpreted.

In the February 7, 2005 Response, the Applicants described, *inter alia*, a fundamental difference between prior art membrane formation processes and the present invention:

- the prior art's removing contaminates from feedstock materials by costly reprecipitation *before* forming a membrane,

as compared to

- the present invention's *first* forming the membrane, and *then* removing impurities from the newly-formed membrane (and doing so *before* the membrane is completely dried).

February 7, 2005 Response at 13-14. At page 3 of the May 9, 2005 Final Office Action, however, it is stated that Applicants maintain the invention is directed to removing impurities after the membrane is *completely* dried, and further that

while the Applicants argue that the Beer reference does not remove dust after the membrane is formed, this latter remark is allegedly not commensurate in scope with the claims. In fact, the Applicants did not argue the positions, nor argue a feature outside the scope of the pending claims.

Claim 1 recites that “*prior to drying* the resulting feedstock membrane,” the impurities are removed from the membrane, *i.e.*, the invention is not directed to impurity removal after the membrane is completely dry. This is consistent with Applicants’ February 7, 2005 Remarks: “... impurities are removed from newly formed membrane *after* the cellulosic membrane layer has been formed, *but before the membrane is completely dried.*” February 7, 2005 Response at 13.

Further, claim 1 recites that the impurity removal is performed from the membrane formed “in the evaporation process of step (a),” as reference which unequivocally establishes that the impurity removal step of claim 1 cannot be performed until *after* the membrane is formed.

In view of the foregoing claim language, the Applicants respectfully submit that the scope of the claims is entirely consistent with the arguments presented in the February 7, 2005 response, and that these claims distinguish the present invention’s fundamentally different approach to the formation of a refined membrane over the cited references.

2. The Prior Art Does Not Disclose or Suggest the Present Invention.

As noted on the February 7, 2005 response, it was known in the prior art to process membrane feedstock materials to precipitate out contaminants *before* the membrane was formed. See Specification at 2:27-32 (“A prior art process for

eliminating [dust formation] consists of reprecipitating commercially available feedstocks ... prior to using such feedstocks in the manufacture of the membrane.”) This prior art approach has a number of disadvantages, including its being a complex multi-phase process, and the cost and inefficiency associated with such “purification.” *Id.* The present invention’s post-membrane formation approach to filter dust treatment eliminates these concerns by eliminating the need for pre-processing of the feedstocks.

For its part, the Beer reference does not disclose the present invention’s dust removal *after* membrane formation. As noted in the prior response, the cited portion of this reference (Beer at 3:45+) *does not support the Examiner’s position*. Rather, this passage instead specifically states that: “*Prior to adding the cellulous derivatives to the polymeric blend solution [from which the membrane is formed], they were first dissolved in acetone and methylene chloride and reprecipitated* by the addition of methanol and water to remove extraneous non-membrane forming substance which are responsible for the creation of “filter dust.” Beer at 3:49-54 (emphasis added). The membrane formation process that follows this pre-casting purification of the feedstock materials is then described at 3:54-66. Thus, the use of methanol and water in Beer is not a post-membrane formation cleaning step, but part of the pre-treatment of the feedstock materials.

Because the Beer reference teaches pre-membrane refinement of feedstocks to remove impurities before the membrane is cast, this reference does not disclose the present invention’s removal of filter dust *after* the membrane has

been formed, and *before* it is dried. Accordingly, reconsideration and withdrawal of the pending rejection based on Beers is respectfully requested.

As to the Johnson reference, in the February 7, 2005 response the Applicants noted that Johnson relates to a microporous membrane filter for the filtration of biological fluids, in which one part of the fluid passes from one side of the filter to the other by passing through the pores of the membrane and the supporting materials (Johnson at 1:6-10; 2:29-40), whereas the present invention is directed to diagnostic assays in which there is no flow *through* the membrane, but instead lateral flow across the surface of the membrane. In the foregoing amendments, the Applicants have made explicit that the process is a process "for producing a no-through-flow diagnostic cellulose membrane."

As a separate grounds for distinguishing Johnson, this reference does not disclose or suggest the present invention's formation of a membrane by the recited phase inversion process, followed by removal of "filter dust" impurities (as recited in amended claim 1) by contact with cleaning agents or devices, and in particular, removal before the membrane is dry. Johnson instead discloses an optional rinsing step which is taught as only "serv[ing] to speed up the removal of residual *solvents* from the semi-solid membrane on the support web 42." Johnson at 7:12-17. Thus, Johnson teaches only accelerated removal of the process solvents used to form the membrane, *i.e.*, not an "*filter dust* impurity." Accord Johnson at 2:64-67 (description of the rinse in the Johnson summary, noting the materials being removed are "residual *non-polymeric* components of the casting lacquer"; not the *polymeric* filter dust addressed by the present

invention). Johnson does not contain a reference to filter dust or dust removal.

Because Johnson does not disclose the removal of filter dust in the manner recited in claim 1, the Applicants respectfully submit that claims 1-17 are not anticipated by Johnson under § 102. Reconsideration and withdrawal of the pending rejection based on Johnson is respectfully requested.

CONCLUSION

In view of the foregoing, the Applicants respectfully submit that on entry of the requested amendments, claims 1-17 would be in condition for allowance. Early and favorable consideration and issuance of a Notice of Allowance for claims 1-17 is respectfully requested.

If there are any questions regarding this Amendment or the application in general, a telephone call to the undersigned would be appreciated since this should expedite the prosecution of the application for all concerned.

If necessary to effect a timely response, this paper should be considered as a petition for an Extension of Time sufficient to effect a timely response. Please charge any such fee or any deficiency in fees, or credit any overpayment of fees, to Deposit Account No. 05-1323 (Docket 010743.50685US).

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Respectfully submitted,



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